

FORM PTO-1390 (Modified)
(REV 11-98)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

201608US2PCT

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

09/720816

INTERNATIONAL APPLICATION NO.

PCT/JP00/01488

INTERNATIONAL FILING DATE

10 March 2000

PRIORITY DATE CLAIMED

13 May 1999

TITLE OF INVENTION

THROWAWAY DIGITAL CAMERA

APPLICANT(S) FOR DO/EO/US

Tarou TAKEMOTO

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ A copy of the International Search Report (PCT/ISA/210).
8. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☐ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).


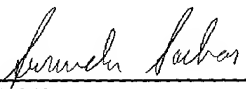
Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☐ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ Certificate of Mailing by Express Mail
20. ☒ Other items or information:

Request for Consideration of Documents Cited in International Search Report

Notice of Priority

Drawings (7 Sheets)

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR 09/720816)		INTERNATIONAL APPLICATION NO. PCT/JP00/01488		ATTORNEY'S DOCKET NUMBER 201608US2	
21. The following fees are submitted: ✓ BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) : <input type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1,000.00 <input checked="" type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 <input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 <input type="checkbox"/> International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 <input type="checkbox"/> International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input checked="" type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$860.00	
				\$130.00	
CLAIMS		NUMBER FILED		NUMBER EXTRA	
Total claims		1 - 20 =		0	
Independent claims		1 - 3 =		0	
Multiple Dependent Claims (check if applicable).				<input type="checkbox"/>	
TOTAL OF ABOVE CALCULATIONS =				\$990.00	
Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) (check if applicable).				<input type="checkbox"/>	
SUBTOTAL =				\$990.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).				\$0.00	
TOTAL NATIONAL FEE =				\$990.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable).				<input type="checkbox"/>	
TOTAL FEES ENCLOSED =				\$990.00	
				Amount to be: refunded \$	
				charged \$	
<input checked="" type="checkbox"/> A check in the amount of \$990.00 to cover the above fees is enclosed. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is enclosed. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 15-0030 A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:					
<div> 22850</div> <div>Surinder Sachar Registration No. 34,423</div>					
<div> SIGNATURE Marvin J. Spivak NAME 24,913 REGISTRATION NUMBER Jan 12 01 DATE</div>					

7/PRTJ

09/720816

JC07 Rec'd PCT/PTO 12 JAN 2001

SPECIFICATION

Throwaway Digital Camera

Technical Field

The present invention relates to a throwaway digital camera and, in particular, one that is suitable for recycling expensive parts.

Background Art

A so-called throwaway camera has a film and a camera integrated and is also referred to as a film having a lens. Such a camera has such a structure that an image pick-up lens having a fixed focus, a film feeding mechanism supported on a rotating member, a manual film winding mechanism, a blade type shutter, a manual press-down type shutter button, a counter for displaying the number of frames used of a film, a direct-view type finder and a film cartridge are incorporated in a body portion formed of plastics.

In recent years, moreover, there has widely been used a digital camera in which image of an object is picked up by an image pick-up element such as a CCD and image data which is a result of the image pick-up are converted digitally and are then recorded in a recording medium such as a memory card.

Although the conventional throwaway camera described

09/720816-10000001

above has all important components incorporated as a camera in the camera body portion formed of plastics, many parts are structural and are therefore unsuitable for recycling specification for newly constituting a camera by reusing after throwaway.

Moreover, some conventional digital cameras comprising a monitor device of a liquid crystal display have been put on the market. Therefore, the workmanship of the picked up image can be confirmed on the spot and unsatisfied image data can be erased on the spot or can be picked up again. Thus, such a camera have not been constituted based on the concept of a throwaway camera.

The present invention has an object to provide a digital camera which can be thrown away and is suitable for building a recycling system.

Disclosure of the Invention

In order to solve the problems described above, the present invention has the following structure. More specifically, a throwaway digital camera of the present invention is characterized by providing an imaging means for picking up an image of an object, storage means for storing the image picked up by the imaging means and control means for controlling these means on a unit substrate, and the unit substrate and a power supply battery for supplying power to each

of the means are accommodated in a container from which they can be separated and collected. In addition to each of the means described above, moreover, there may be provided data transfer means for transferring images stored in the storage means to an external printer or the like.

Accordingly, expensive parts such as the imaging means, the storage means, the control means and the data transfer means are disposed integrally on the unit substrate, and furthermore, the unit substrate and the power supply battery for supplying power to each of the means described above are housed in the container from which they can be collected separately. Therefore, the expensive parts can be easily collected by sorting out the unit substrate from the power supply battery as a source of environmental pollution.

Brief description of the Drawings

Fig. 1 is a perspective view showing the appearance of a throwaway digital camera, Fig. 2 is a view schematically showing the inner portion of the throwaway digital camera, and Fig. 3 is a view showing a state in which image data are transferred to outside. Moreover, Fig. 4 is a view schematically showing the inner portion of another embodiment, and Fig. 5 is a perspective view showing the appearance of a multimedia terminal. Furthermore, Fig. 6 is a view showing a structure of a rental system of the digital camera, and Fig.

7 is a perspective view showing the appearance of another multimedia terminal.

Best Mode for Carrying Out the Invention

An embodiment of the present invention will be described below with reference to the drawings.

Fig. 1 is a perspective view showing the appearance of a throwaway digital camera 1 (which will be hereinafter referred to as a digital camera 1) according to the present invention. As shown in this figure, the digital camera 1 has an outer shell constituted by a container 2. A shutter switch 3 is provided on the top surface of the container 2, a lens portion 4, a finder hole 5 and a stroboscopic hole 6 are provided in the front portion, and a transmitting and receiving hole 7 is provided on the bottom surface. Fig. 1(a) is a view showing the digital camera 1 seen from above and Fig. 1(b) is a view showing the digital camera 1 seen from below.

The container 2 includes a base portion 21 formed of plastics and a paper cover 22 covering the base portion 21, and the paper cover 22 has a hole opened corresponding to the lens portion 4 or the like. The paper cover 22 can enhance an interest in the digital camera 1 by printing a design, and can be removed or exchanged depending on such necessity.

Fig. 2 is a view typically showing a state in which the paper cover 22 is broken and a rear cover (not shown) provided

on the back face side of the base portion 21 is then removed. As shown in this figure, the inside of the digital camera 1 is provided with a unit substrate 8 which can be removed from the base portion 21 and a battery 9 to be a power source which can be removed as well. The unit substrate 8 is provided with a stroboscopic light emitting member 81 for generating light for image pick-up, a capacitor 82 for storing electricity necessary for the light emission of the stroboscopic light emitting member 81 and an electronic circuit 83.

The electronic circuit 83 includes a CCD element 83a to be imaging means which is provided on the back face side of the unit substrate 8 and serves to pick up an image of an object, a RAM 83 to be storage means for storing image data picked up by the imaging means, infrared light emitting and receiving diodes 83c and 83d to be data transfer means for transferring the image data stored by the storage means to outside, and control means having a CPU 83e for controlling each of the means and a ROM 83f storing a control program.

Description will be given to the procedure for picking up an image of an object and printing the picked up image through a printer by the digital camera 1 thus constituted.

First of all, a user moves the digital camera 1 to be turned toward the object, and presses down the shutter button 3. When the shutter button 3 is pressed down, light transmitted through the lens portion 4 is caught by the CCD element 83a and is

converted into image data and the image data are stored in the RAM 83b.

As shown in Fig. 3, next, the user puts the digital camera 1 such that a reading portion A1 of the printer A, and presses down a reading switch (not shown) on the printer. When the reading switch is pressed down, a data request signal is transmitted from the reading portion A1 of the printer A toward the transmitting and receiving hole 7.

Furthermore, the data request signal thus transmitted is received by the light receiving diode 83d through the transmitting and receiving hole 7 and is transmitted to the CPU 83e. The CPU 83e reads the image data stored in the RAM 83b on receiving the data request signal, and flashes the light emitting diode 83c based on the read image data and transmits the image data.

Finally, the image data transmitted from the light emitting diode are received by the reading portion A1 of the printer and are stored in a memory (not shown) of the printer. When the transfer of the image data is completed, the completion is displayed on a display unit (not shown) of the printer A. When the user presses down a print switch (not shown), the image data will be printed out.

Thus, the digital camera 1 records the image data in the storage means differently from the throwaway camera using a film. Therefore, photographing and printing can be repeated without

exchanging the film. However, the digital camera 1 might be broken or damaged as it is used. In such a case, the digital camera 1 can be exactly discarded. Since the digital camera 1 includes the unit substrate 8 on which expensive parts are mounted and the battery 9 which may be a source of environmental pollution, it is recycled in the following procedure.

First of all, the paper cover 22 is removed by breaking to open the rear cover provided on the back face side of the base portion 21. Next, the unit substrate 8 and the battery 9 are removed and each portion is separated. Finally, the base portion 21 is molten and is recycled as recycled plastics, the paper cover 22 is recycled as a recycled paper, the unit substrate 8 is reused as it is, and the battery 9 is recycled according to the amount of residual power or is recycled as a battery material. In the case in which only the paper cover 22 is broken, it is sufficient that the paper cover 22 is exchanged for recycling.

In the digital camera 1, thus, the unit substrate 8 and the battery 9 can be removed from the container 2. Therefore, the expensive unit substrate 8 and the battery 9 to be a source of environmental pollution can be sorted and recycled easily.

While infrared rays are used for data transfer between the digital camera 1 and the printer A in the embodiment described above, the data transfer can be carried out by other means.

As shown in Fig. 4, for example, a connector 83g may be used, and a connecting portion of the connector 83g may be turned toward the bottom face side of the digital camera 1 as shown in Fig. 4(a) and may be turned toward the battery 9 side as shown in Fig. 4(b). By using the connector 83g, the image data can be transferred more reliably at a high speed. In the case in which the connecting portion of the connector 83g is provided to be turned toward the bottom face side of the digital camera 1, the data transfer can be carried out without breaking the paper cover 22. In the case in which the connecting portion of the connector 83g is provided to be turned toward the battery 9 side of the digital camera 1, the battery 9 should be removed to expose the connecting portion as shown in Fig. 4(b). Therefore, the connecting portion can be prevented from being damaged.

Although the paper cover 22 is used in the embodiment described above, a shrink wrap may be used. By using the shrink wrap, the lens portion 4 can be protected from an external shock until the digital camera 1 is used or recycled. In order to more reduce a load to be applied to a natural environment, a secondary battery such as a nickel cadmium cell may be used for the battery 9. In order to recycle the digital camera 1 more efficiently, the unit substrate 8 and the battery 9 may be integrated.

While the data recorded in the digital camera 1 are printed

out by the printer A in the embodiment described above, furthermore, the image data can also be utilized in other ways such as by a multimedia terminal M or can be incorporated in a part of a rental system for utilization.

Fig. 5 is a perspective view showing the appearance of the multimedia terminal M. As shown in this figure, the multimedia terminal M includes a reading portion M1 for mounting the digital camera 1 to transfer image data, a printer M2 for printing the image data out, a media drive M3 for storing the image data in various media such as a floppy disk, a touch panel M4 for the user to operate the multimedia terminal M by an interactive method, and a cash throwing slot M5 for putting a service fee therein. A method of using the multimedia terminal M thus constituted will be described below.

First of all, when the user mounts the digital camera 1 on the reading portion M1, the multimedia terminal M reduces and displays the image data stored in the digital camera 1 on the touch panel M4, and requests a selection of the image data to be processed.

Next, when the user selects specific image data, the multimedia terminal M gives a request for interactively setting a method of utilizing the image data by using the touch panel M4 in which the image data stored in the digital camera 1 are printed or stored in various media or a method of operating the image data such as brightness correction or decoration

application.

Finally, when the user completes a setting work, the multimedia terminal M gives a request for paying a fee. When the user pays the fee through the cash throwing slot M5, the multimedia terminal M prints out the image data in accordance with the set contents.

Such a multimedia terminal M is provided in a convenience store, for example, a person which does not have the printer A can utilize the digital camera 1.

Moreover, the rental system of the digital camera 1 can be built by a combination of the multimedia terminal M with the digital camera 1.

Fig. 6 is a schematic view showing such a rental system. The rental system is constituted by the digital camera 1, multimedia terminals MX and MY provided in stores X and Y respectively, and a computer C connected to the multimedia terminal M through a communication line T and put in a management head office Z.

When the user rents the digital camera 1 and pays a rental fee in the store X, a serial number and the like of the digital camera 1 is notified to the computer C through the multimedia terminal MX. The rental fee includes a fee (print right charge) for printing a constant number of, for example, 24 image data photographed by the digital camera 1.

When the serial number of the digital camera 1 is received

in the computer C, the print charge of the digital camera 1 is set to be an initial value, for example, a fee for 24 sheets and is stored.

In the case in which the user prints the image photographed by the digital camera 1, he (or she) can bring the digital camera 1 to the store X or Y to carry out printing through the multimedia terminal MX or MY. When the printing is carried out, the number of prints and the kind of a multimedia terminal are registered in the computer C through the communication line T.

In the case in which the user carries out the printing in the store X, the print charge which has already been paid is utilized. In the case in which the user carries out the printing in the store Y, however, the store Y should execute the printing without receiving the payment. Therefore, a loss is caused for each printing. In order to eliminate this drawback, marginal profits of the stores are calculated based on the record of the computer C and the management head office Z collects an excess from the store (for example, the store X) which gets too much print charge and pays the same excess to the store (for example, the store Y) which has not got the print charge.

Thus, the management head office Z manages the print charge and makes up the difference in the print charge between the stores. Consequently, the rental system can be employed without an unfair feeling between the stores.

09720316 030704
102020 91802680

In addition, the rental system has the multimedia terminal MX and MY connected to each other through the computer C. Therefore, the image data of the digital camera 1 can be read by the multimedia terminal MX, the image data can be transferred through the computer C and the printing can also be carried out in the multimedia terminal MY. Moreover, if the digital camera 1 is not put on the reading portion M1 but is accommodated in the reading hole M6 provided in the multimedia terminal M in order to carry out the data transfer as shown in Fig. 7, a recovery rate of the digital camera 1 can be increased. Furthermore, it is also possible to employ such a rental system that the computer C does not manage the print charge but manages only the state of the camera which is being rented or not. By using such a rental system, accounting management or the like can easily be carried out so that a fee for managing the rental system can be reduced.

Industrial Availability

As described above, the throwaway digital camera according to the present invention has such a structure that expensive parts such as imaging means, storage means and control means are provided integrally on a unit substrate and the unit substrate and a power supply battery for supplying power to each of the means are accommodated in a container capable of being separated and collected. Therefore, the throwaway digital

camera can be thrown away and is also suitable for building a recycling system.

CLAIMS

1. A throwaway digital camera in which imaging means for picking up an image of an object, storage means for storing the image picked up by the imaging means and control means for controlling these means are provided on a unit substrate, and the unit substrate and a power supply battery for supplying power to each of the means are accommodated in a container which can be separated and collected.

2. The throwaway digital camera according to claim 1, further comprising data transfer means for transferring the image stored in the storage means to an external printer or the like.

ABSTRACT

A throwaway digital camera suited to a recycling system. The throwaway digital camera (1) includes a unit substrate (8), on which are mounted expensive parts, including a CCD device (83a) as imaging means, RAM (83b) as storage means, infrared emitting/receiving photodiodes (86c, 86d) as data transfer means, and CPU (83e) and ROM (83f) as control means. The unit substrate (8) and a power supply battery (9) for supplying power to all the means described above are housed in a container (2) from which they can be collected separately. Expensive parts can be easily collected by removing the unit substrate (8) separately from the battery (9) as a source of environmental pollution.

1 / 7

Fig.1

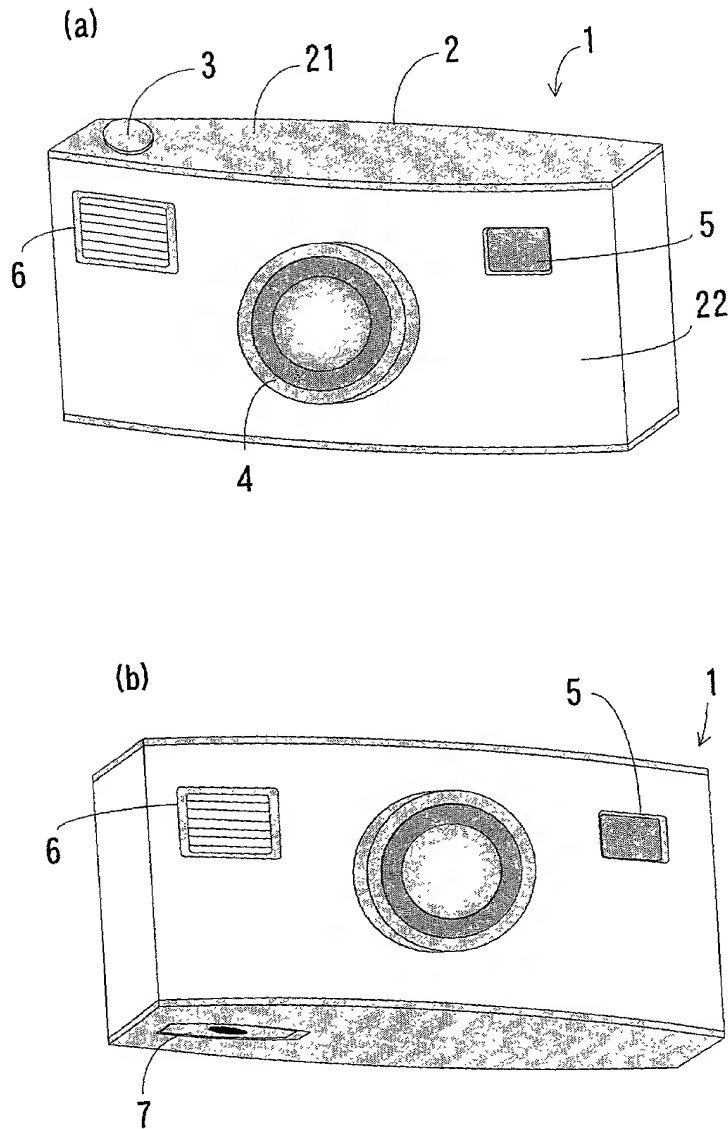
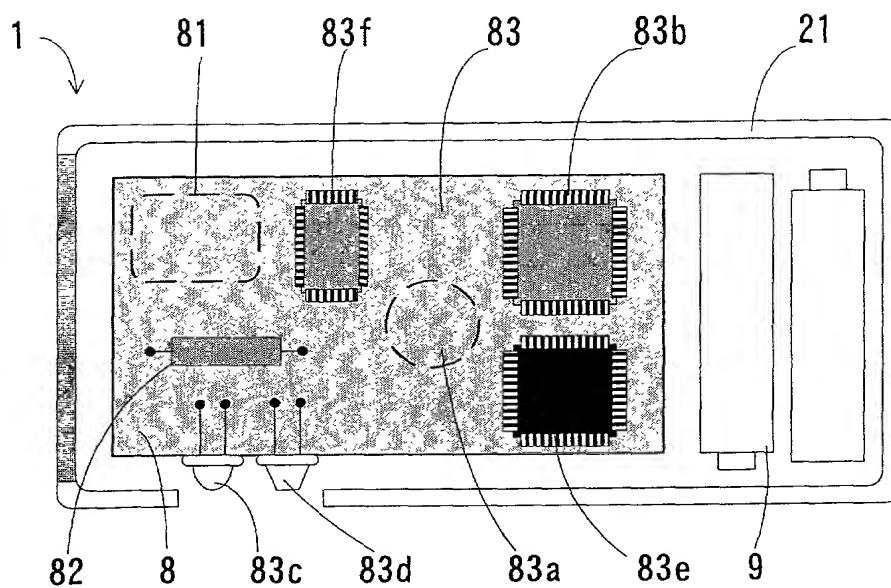
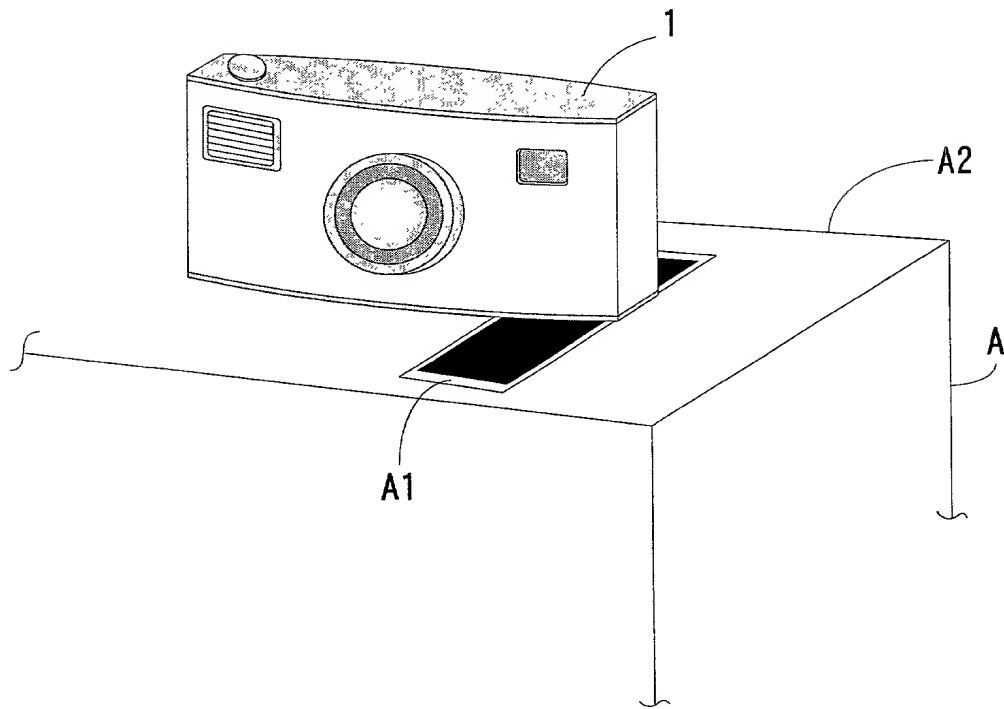


Fig.2



3 / 7

Fig.3



4 / 7

Fig.4

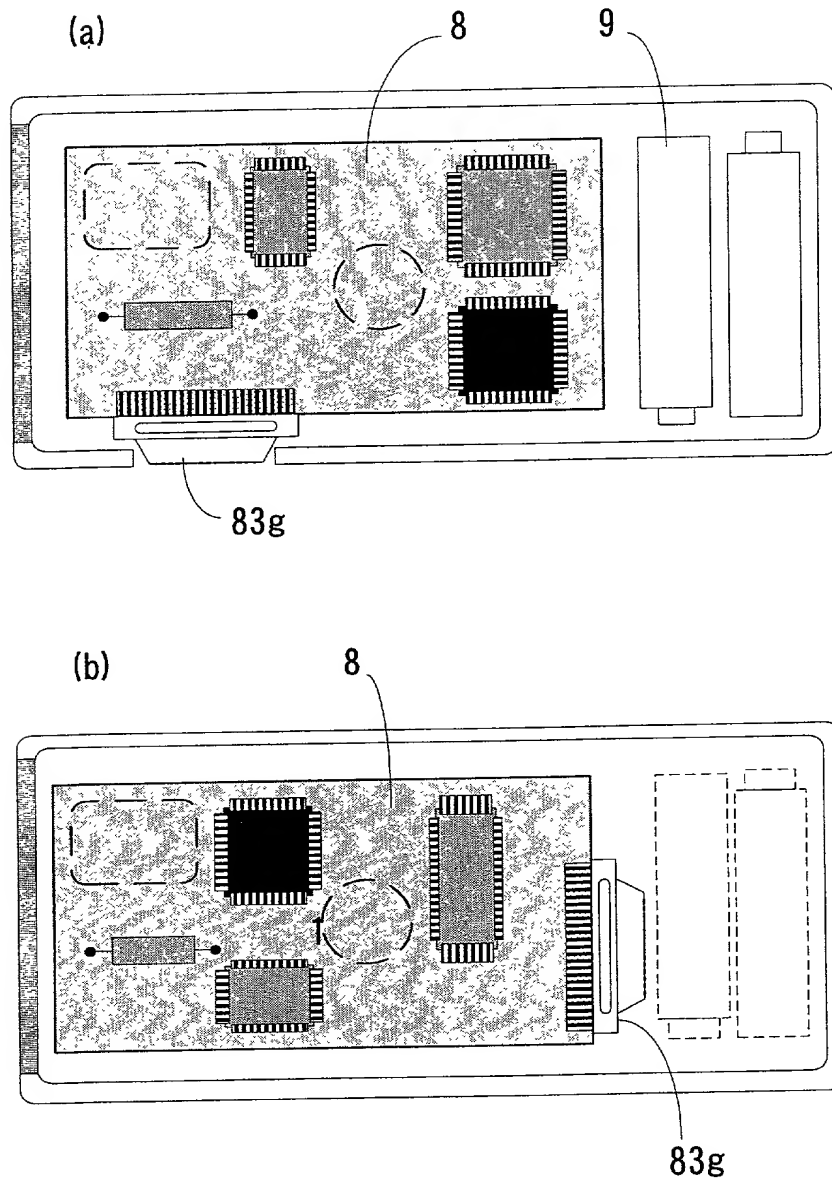
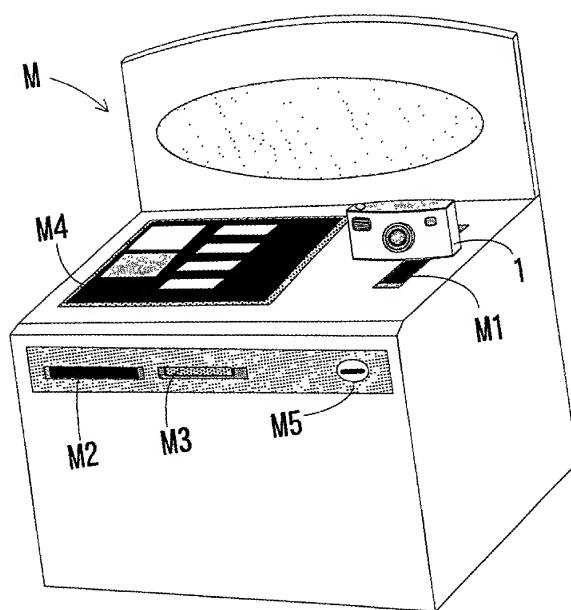


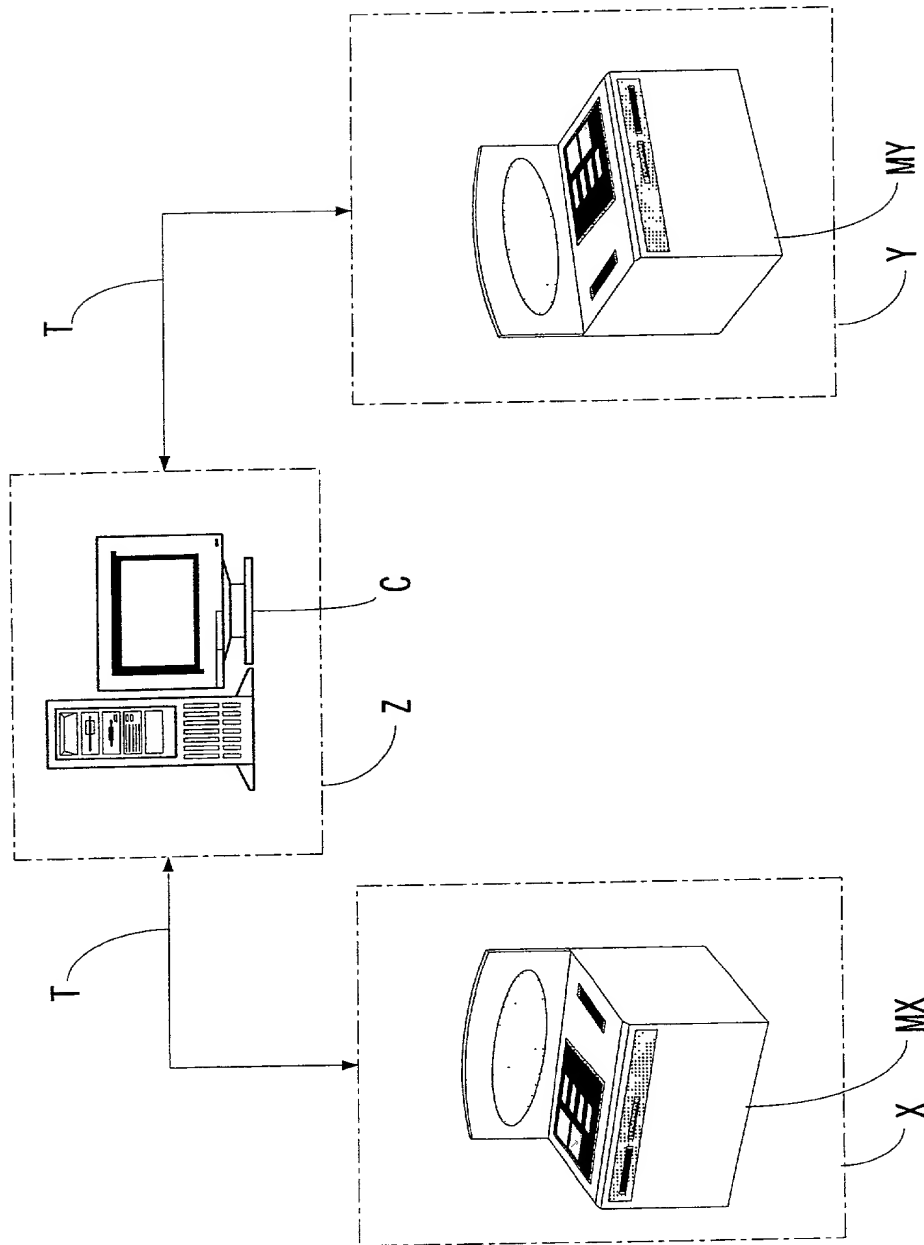
Fig.5



FILED: 9002260

6 / 7

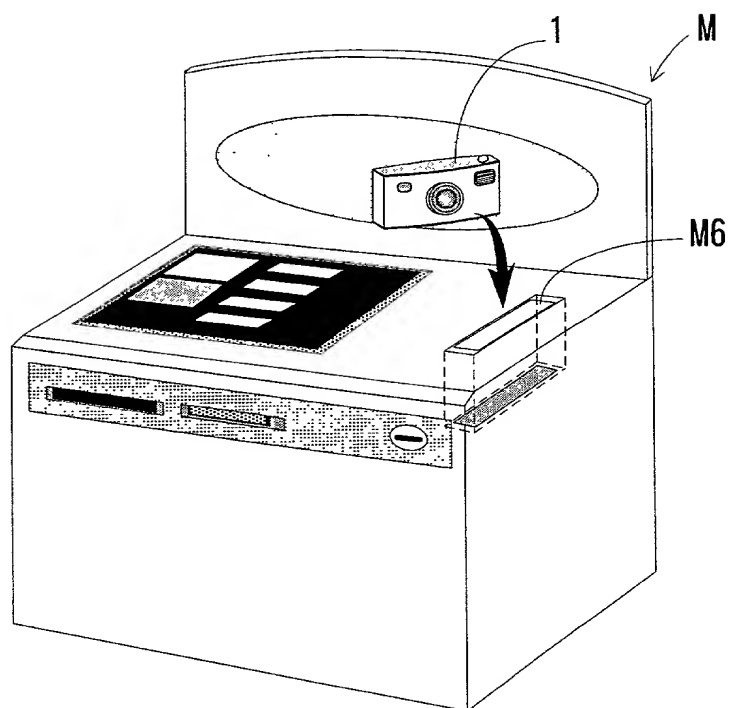
Fig.6



09/720816

7 / 7

Fig.7



#3

Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者（下記の名称が複数の場合）であると信じています。

上記発明の明細書は、

- ☐ 本書に添付されています。
- ☐ ____月____日に提出され、米国出願番号または特許協定条約国際出願番号を____とし、
(該当する場合) _____に訂正されました。

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled.

THROWAWAY DIGITAL CAMERA

the specification of which

- ☐ is attached hereto.
- ☒ was filed on January 12, 2001
as United States Application Number or
PCT International Application Number
09/720,816 and was amended on
_____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

Japanese Language Declaration
(日本語宣言書)

私は、米国法典第35編119条 (a) - (d) 項又は365条 (b) 項に基づき下記の、米国以外の国の少なくとも一カ国を指定している特許協力条約365 (a) 項に基づく国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

Prior Foreign Application(s)
外国での先行出願

11/132973	JAPAN
(Number) (番号)	(Country) (国名)
(Number) (番号)	(Country) (国名)

私は、第35編米国法典119条 (e) 項に基づいて下記の米国特許出願規定に記載された権利をここに主張いたします。

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

私は、下記の米国法典第35編120条に基づいて下記の米国特許出願に記載された権利、又は米国を指定している特許協力条約365条 (c) に基づく権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第35編112条第1項又は特許協力条約で規定された方法で先行する米国特許出願に開示されていない限り、その先行米国出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則法典第37編1条56項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

PCT/JP00/01488	10 March 2000
(Application No.) (出願番号)	(Filing Date) (出願日)

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

私は、私自信の知識に基づいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じるところに基づく表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18編第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の声明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

13 May 1999	Priority Claimed 優先権主張
(Day/Month/Year Filed) (出願年月日)	<input checked="" type="checkbox"/> Yes はい
(Day/Month/Year Filed) (出願年月日)	<input type="checkbox"/> No いいえ

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Japanese Language Declaration

(日本語宣言書)

委任状：私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。
(弁護士、または代理人の指名及び登録番号を明記のこと)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

Norman F. Oblon, Reg. No. 24,618; Marvin J. Spivak, Reg. No. 24,913; C. Irvin McClelland, Reg. No. 21,124; Gregory J. Maier, Reg. No. 25,599; Arthur I. Neustadt, Reg. No. 24,854; Richard D. Kelly, Reg. No. 27,757; James D. Hamilton, Reg. No. 28,421; Eckhard H. Kuesters, Reg. No. 28,870; Robert T. Pous, Reg. No. 29,099; Charles L. Gholz, Reg. No. 26,395; William E. Beaumont, Reg. No. 30,996; Jean-Paul Lavalleye, Reg. No. 31,451; Stephen G. Baxter, Reg. No. 32,884; Richard L. Treanor, Reg. No. 36,379; Steven P. Weihrauch, Reg. No. 32,829; John T. Goolkasian, Reg. No. 26,142; Richard L. Chinn, Reg. No. 34,305; Steven E. Lipman, Reg. No. 30,011; Carl E. Schlier, Reg. No. 34,426; James J. Kulbaski, Reg. No. 34,648; Richard A. Neifeld, Reg. No. 35,299; J. Derek Mason, Reg. No. 35,270; Surinder Sachar, Reg. No. 34,423; Jeffrey B. McIntyre, Reg. No. 36,867; William T. Enos, Reg. No. 33,128; Michael E. McCabe, Jr., Reg. No. 37,182; Bradley D. Lytle, Reg. No. 40,073; and Michael R. Casey, Reg. No. 40,294, with full powers of substitution and revocation.

書類送付先

Send Correspondence to:

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

直接電話連絡先：(名前及び電話番号)

Direct Telephone Calls to: (name and telephone number)

(703) 413-3000

単独発明者または第一の共同発明者の氏名	1-00	Full name of sole or first joint inventor	Tarou TAKEMOTO
発明者の署名	日付	Inventor's signature	Date 15 FEB 2001
住所		Residence	c/o SBU Consultant Company, #801 Tojyusou Yamabukichou Building, 337,
国籍		Citizenship	Yamabuki-chou, Shinjyuku-ku, Tokyo JAPAN 162-0801, JAPAN
郵便の宛先		Post Office Address	same as above JPX
第二の共同発明者の氏名		Full name of second joint inventor, if any	
第二の共同発明者の署名	日付	Second joint Inventor's signature	Date
住所		Residence	
国籍		Citizenship	
郵便の宛先		Post Office Address	

(第三以降の共同発明者についても同様に記載し、署名すること)

(Supply similar information and signature for third and subsequent joint inventors.)